Chuckra 11+ Maths Paper 5

1 The table below shows how many music lessons have been taken by the students learning to play the violin. How many lessons has Dylan had so far?

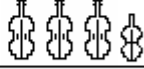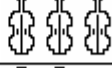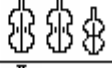| Numbers of Bottles |
| --- |
| Key |
| 🎻 stands for 10 lessons |
| 🎻 stands for less than 10 lessons |
| Annika | 🎻 🎻 🎻 🎻 🎻 |
| Sionned | 🎻 🎻 🎻 🎻 |
| Carly | 🎻 🎻 🎻 |
| Dylan | 🎻 🎻 🎻 |
| Rhiannon | 🎻 🎻 |

| 2.5 | 3 | 20 | 25 | Between 20 and 30 |

2 There are 979 people watching a football match. Of these, 658 people support the home team. How many people do not support the home team?

| 123 | 132 | 213 | 231 | 321 |

3 Approximately how far would a person walk in 5 minutes (at a normal pace)?

| 0.5m | 5m | 50m | 500m | 5,000m |

4 There are 284 sweets in a tin. Half of them are removed. A week later, half of the remaining sweets are removed from the tin. How many sweets are now left?

| 70 | 71 | 72 | 73 | 74 |

5 Which number is divisible by both 4 and 5?

| 9 | 30 | 45 | 55 | 60 |

6 Nikki and Stephanie buy their lunch together in the canteen. Nikki pays £8.95 for the two meals together. Nikki's meal cost only £4.20. How much does Stephanie owe her?

| £4.20 | £4.25 | £4.50 | £4.75 | £5.75 |

7 Which of the following is the longest measurement?

| 0.01m | 0.1m | 100mm | 10cm | 0.001km |

8 Below are sets of three numbers. Which set has only numbers that are multiples of 3 or 5?

| 8, 9, 10 | 9, 10, 20 | 10, 12, 16 | 12, 14, 20 | 16, 21, 25 |

9 A survey records the pets owned by 90 pupils. In total there were 120 pets.
   The table shows the results.
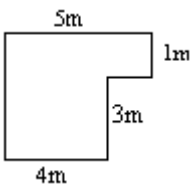   How many dogs were owned by boys?

	Girls	Boys
Dogs	28	?
Cats	19	17
Other	14	10

   2   7   12   22   32

10 Gillian, Jackie, Peter and Martin are each given eighteen cherries from a bag and there are three left
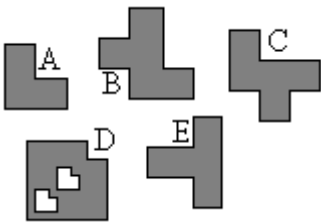   over.
   How many cherries were originally in the bag?

   68   71   75   77   78

11 The diagram below shows the plan of a room. What is the perimeter of the room?

   5m

   1m

   3m

   4m

   4m   5m   13m   18m   60m

12 Which of the five shapes shown below have no lines of reflective symmetry?
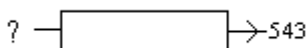
   A and D   A and E   B and C   C and D   D and E

13 Bottles are packaged in large boxes, each containing a maximum of 24 bottles. There are 132
   bottles. How many boxes are required in order to pack all the bottles?
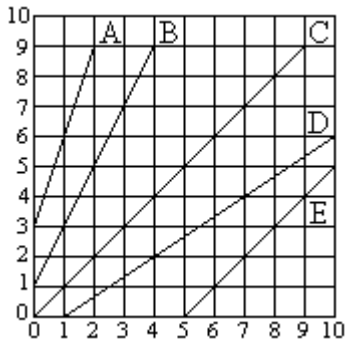
   4   5   6   7   8

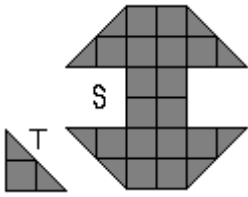14 This machine multiplies numbers by 5 and then adds 8. Which number has been put in?

   ? —[   ]→ 543

   101   103   105   107   109

15 This graph shows five lines. Which pair of lines is parallel?

| A and B | A and E | B and C | C and E | D and E |

16 How many times will shape T fit into shape S?

| 4 | 6 | 8 | 10 | 12 |

17 An author has written 510 pages of a book. She estimates that each page contains 250 words. What is a good estimate for the number of words she has written?
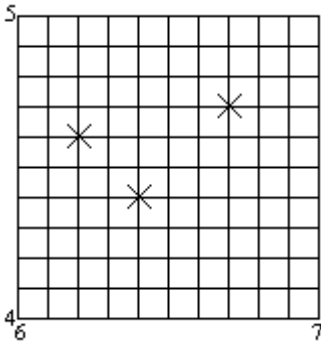
| 1,275 | 12,750 | 127,500 | 1,275,000 | 12,750,000 |

18 What are the coordinates of the dots in the grid shown below?
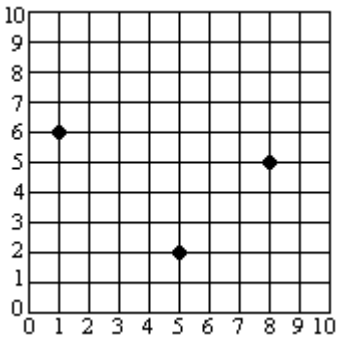
| (6, 1), (5, 2) and (5, 8) | (1, 6), (5, 2) and (8, 5) | (1, 6), (2, 5) and (5, 8) | (1, 6), (2, 5) and (8, 5) | (6, 1), (2, 5) and (5, 8) |

19 The grid below has three points marked. When a fourth point is added, the dots can be joined to make a rectangle.
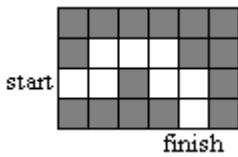What are the coordinates of the new point?

| (4.9, 6.5) | (6.5, 4.9) | (6.4, 4.7) | (4.7, 6.4) | (4.9, 6.4) |

20 A plan of a house uses a scale of 5cm to 1m. On the plan the hall is 8cm long. What is the real length of the hall?
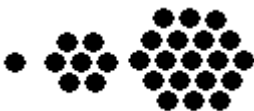
| 8cm | 1.6m | 1.8m | 16m | 40m |

21 Angie wants to program a robot to travel along the path shown in the picture. The robot can only move FORWARD, TURN RIGHT 90° and TURN LEFT 90°.
What instructions will take the robot through the maze, (starting and finishing outside the maze, at the points labelled)?

FORWARD 2,	FORWARD 2,	FORWARD 2,	FORWARD 2,	FORWARD 2,
LEFT 90°,	LEFT 90°,	LEFT 90°,	RIGHT 90°,	LEFT 90°,
FORWARD 1,	FORWARD 1,	FORWARD 1,	FORWARD 1,	FORWARD 1,
RIGHT 90°,	RIGHT 90°,	LEFT 90°,	LEFT 90°,	RIGHT 90°,
FORWARD 2,	FORWARD 3,	FORWARD 2,	FORWARD 2,	FORWARD 2,
RIGHT 90°,	RIGHT 90°,	LEFT 90°,	LEFT 90°,	RIGHT 90°,
FORWARD 2,	FORWARD 2,	FORWARD 2,	FORWARD 2,	FORWARD 1,
LEFT 90°,	LEFT 90°,	LEFT 90°,	RIGHT 90°,	LEFT 90°,
FORWARD 1,	FORWARD,	FORWARD 1,	FORWARD 1,	FORWARD 1,
RIGHT 90°,	RIGHT 90°,	LEFT 90°,	LEFT 90°,	RIGHT 90°,
FORWARD 2	FORWARD 1,	FORWARD 2	FORWARD 2	FORWARD 2
	LEFT 90°,			
	FORWARD 2			

22 How many balls are needed to make the next shape in the sequence?

| 37 | 38 | 42 | 52 | 54 |

23 You multiply a number by itself. The answer is then multiplied by 5.
The final answer is 320. What number did you start with?

| 5 | 6 | 7 | 8 | 9 |

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24 All the rows and columns in the grid below add up to 20. What number goes in the square containing the question mark?

5		11
3	15	
		?

    3   5   7   9   11

25 Carrots cost £0.92 per kilo. How much will 2.5kg cost?

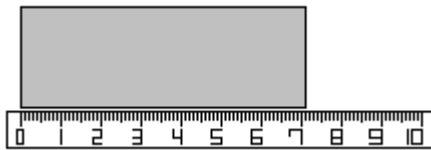£1.85   £2.25   £2.29   £2.30   £2.85

26 The piece of card is being measured with a ruler. What is the measurement shown on the ruler?

0.71   1.07   7.01   7.1   71

27 What percentage of the squares in the grid below have trees in them?

11%   22%   33%   44%   55%

28 y is one fifth of x
Which of the following is not true?

$2x = 10y$ $y = 5x$ $y \div x = 0.2$ $x \div y = 5$ $y = x \div 5$

29

The pie chart shows the proportions of different drinks chosen from a busy café serving breakfast one morning. There were 480 drinks sold in total.
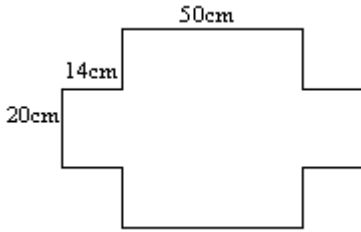How many of these were coffees?

180   184   188   192   196

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30 The shaded corners are cut out of this flat shape. It is then folded to make an open box. What is the volume of the box?
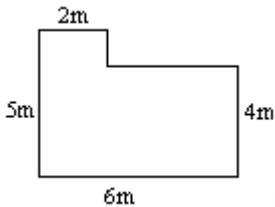
50cm

14cm

20cm

| $14cm^3$ | $140cm^3$ | $1,400cm^3$ | $14,000cm^3$ | $140,000cm^3$ |

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31 What is this number rounded to one decimal place?

6989.453

| 6 | 6.9 | 7.0 | 6989.4 | 6989.5 |

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32 The diagram below shows the plan of a room. What is the area of the floor?

2m

5m   4m

6m

| $12m^2$ | $17m^2$ | $24m^2$ | $26m^2$ | $30m^2$ |

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33 The bar chart shows the number of hours that pupils spend playing sport each month. Which statement must be true?

Number of pupils

0-9 10-19 20-29 30-39 40-49
Hours spent playing sport per month
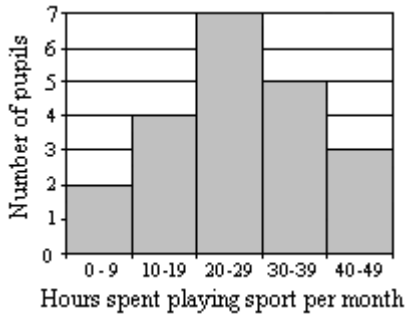
| One chils plays sport for exactly 40 hours. | Three children play sport for 40 hours or more. | Exactly 16 children play sport for more than 10 hours but less than 39 hours per month. | Between 20 and 29 children play sport for exactly 7 hours per month. | Exactly 2 children play sport for less than 9 hours per month. |

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34 If A = B + 2C − 3D and B = 9, C = 5 and D = 1 then what is A?

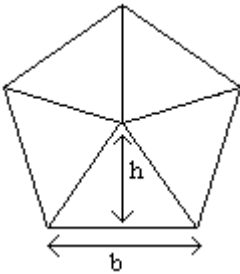| 14 | 15 | 16 | 17 | 18 |

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35 Mr Jones is recording how many eggs his hens lay.
The table shows how many eggs the hens laid over a whole week.

Day	Number of Eggs Laid
Monday	8
Tuesday	2
Wednesday	4
Thursday	8
Friday	11
Saturday	7
Sunday	9

What is the mean number of eggs laid?

| 2 | 6 | 7 | 8 | 11 |

36 The diagram shows a regular pentagon. What is the area?

| b × h | 5 × (b × h) | 5 × (b × h) ÷ 2 | 2 × (b × h) ÷ 5 | (2 ÷ b) × h × 5 |

37 Michael and his younger sister Nina eat biscuits every day when they get home from school. A packet contains 28 biscuits. Michael eats m biscuits and Nina eats only n. After 5 days there are 3 biscuits left.
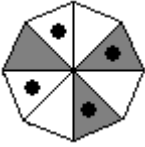Which answer is correct?

| m = 2 and n = 1 | m = 4 and n = 3 | m = 4 and n = 1 | m = 4 and n = 2 | m = 3 and n = 1 |

38 The area of the shaded triangle is 25mm^2. What is the area of the whole shape?
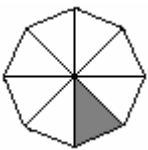
| 100m^2 | 125mm^2 | 150mm^2 | 175mm^2 | 200mm^2 |

39 The picture below shows a spinner. Which of the following statements is true?

There is an even chance of it landing on a shaded sector.	There is an even chance of it landing on a sector with a dot.	There is a less than even chance of it landing on a sector without a dot.	There is a more than even chance of it landing on a shaded sector with a dot.	There is the same chance of it landing on a shaded sector with a dot as there is of it landing on a shaded sector without a dot.

40 At Sonya's school there are 380 children. 45% have TVs in their bedrooms at home. How many do not have TVs in their bedrooms?

55	167	171	190	209

41 Gretchen pays $29.99 for a DVD on her holiday. The exchange rate is £1 = $1.90. How much was the DVD in pounds?

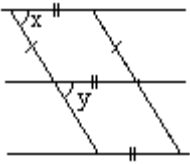| £14.99	£15.00	£15.78	£15.79	£56.98

42 The picture shows 3 horizontal lines with 2 parallel lines crossing them. Angle x is:

More than y	Less than y	The same as y	90^0 - y	180^0 - y

43 Two coaches are booked for the school trip. The first coach seats 63 and the second seats 41 passengers.
There are 9 adults, 45 girls and 42 boys going on the trip. Approximately what percentage of the seats will be empty?
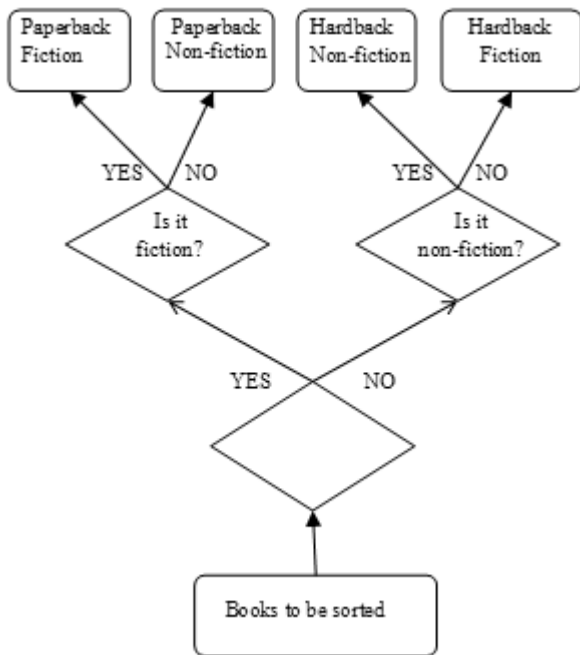
6%	8%	10%	12%	14%

44 The decision tree below is used for sorting books.
What is missing from the empty shape?

| Paperback Fiction | Paperback Non-fiction | Hardback Non-fiction | Hardback Fiction |

YES / NO — Is it fiction?   YES / NO — Is it non-fiction?
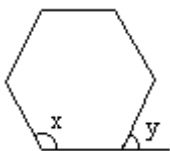
YES   NO

Books to be sorted

Paperbacks | Is it paperback? | Is it hardback? | Is it non-fiction? | Hardbacks

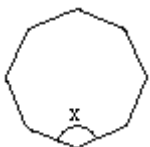45 What number is the arrow pointing to on the number line below?

50.5   50.6

50.2 | 50.5 | 50.52 | 50.54 | 50.7
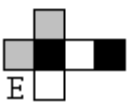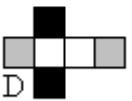
46 Which of the following statements is not true?
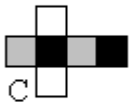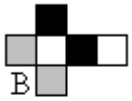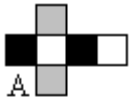

Angle x is 120° | Angle y is 60° | The angles inside the shape (interior angles) add up to 360° | Angle x and angle y add up to 180° | 6y = 360°

47 What is the size of the angle x in the regular octagon below?

130° | 135° | 140° | 145° | 150°

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48 Which net below would make a cube which doesn't look the same as any of the other cubes in the collection?

A

B

C

D

E

A	B	C	D	E

49 The bookshelf is 40cm tall.
    Which of the following is closest to this height in inches?

10 inches	15 inches	20 inches	25 inches	30 inches

50 What is the reading on the measuring scales?

4.2	5.3	5.6	6.3	7.1